Application Number 09/778,484
Response to Office Action mailed April 20, 2005

REMARKS

The following remarks are responsive to the Office Action dated April 20, 2005. Claims 1-43 are pending in the present application.

Claim Rejection Under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 40-43 under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant respectfully traverses this rejection.

In support of the rejection, the Examiner raised several questions with respect to the meanings of the terms "complex shape," "simple shape," and "increased perimeter." For example, the Examiner asked:

1- What does Applicant consider an object as a complex shape?

2- What does Applicant consider an object as a simple shape?

3- How does Applicant define complex and simple shapes?

4- What does Applicant mean by a term "an increased perimeter"?

Applicant respectfully submits that the terms "complex shape," "simple shape," and "increased perimeter" are sufficiently clear in light of the ordinary meaning of such terms, the claim language, and Applicant's detailed description and drawings.

As described in paragraphs [0009] and [0094], examples of simple shapes include patches or bars, which are generally rectangular. Complex shapes, in contrast, are substantially non-rectangular, and may include numerals or letters. A complex shape aids the human eye in resolving gray scale differences between dark elements and a dark background.

In general, complex shapes better engage the pattern recognition capabilities of the human eye, resulting in heightened sensitivity to gray scale differences. When the human eye is called upon to perform pattern recognition, its sensitivity to color gradations between a given pattern and a surrounding area increase.

A complex shape may present a longer boundary, relative to a simple shape, and thereby promote an increased perimeter for contrast. With an increased perimeter, a dark element with a complex shape facilitates gray scale differentiation by a human eye, in comparison to simple shapes, such as the rectangular patches used in the prior art.

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Applicant respectfully submits that one skilled in the art would have no difficulty ascertaining the metes and bounds of the inventions defined by claims 40-43. The terms "complex shape," "simple shape," and increased perimeter" are sufficiently clear. Therefore, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. 112, second paragraph.

Claim Rejection Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-2, 6, 9-13, 37, 23-24, 28, 31-32, 34-35 and 39 under 35 U.S.C. 102(b) as being anticipated by PCT Publication WO 99/56088 to Gentile (Gentile). Applicant respectfully traverses the rejection. Gentile fails to disclose the features of the claimed invention, as required by 35 U.S.C. 102(b), and provides no teaching that would have suggested the desirability of modification to include such features.

Gentile fails to disclose or suggest displaying a sequence of dark elements against a black background, wherein each of the dark elements has a different gray value and a non-rectangular shape, and estimating a blackpoint for a display device based on one of the dark elements selected by the user that is visible and appears to most closely match the background, as required by Applicants' claims 1-42.

The Examiner's application of Gentile to Applicant's claims appears to be the result of a basic misinterpretation of the Gentile reference. In support of the rejection, the Examiner stated that Gentile "in fig. 1 step 106 illustrates displaying the gray patches with i-1, i, i+1 that considers [sic] a non-rectangular shape." Apparently, the Examiner believes that the i-1, i, i+1 values shown in FIG. 1 are characters, i.e., numerals and letters, that are actually displayed as or with the gray patches in the process described by Gentile. This is plainly incorrect.

The i-1, i, and i+1 values shown in FIG. 1 of Gentile are index values used to identify the gray patches. The i-1, i, and i+1 characters are not displayed in the Gentile process. Rather, the index values i-1, i, and i+1 identify individual gray patches displayed by Gentile, and permit the process to increment and decrement the index to display additional gray patches based on user selection. See Gentile, page 3, lines 18-21, page 4, lines 30-32, page 5, lines 5-16. In this manner, a computer software tool can index gray patches within an array of patches for display to a user in successive iterations.

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Gentile makes no mention whatsoever of the display of non-rectangular gray elements, much less the display of characters representing index values i-1, i, and i+1. Instead, like other prior art previously applied by the Examiner, Gentile merely refers to gray "patches" and does not attribute non-rectangular shapes to such patches. In view of the absence of any teaching that would have suggested displaying, against a black background, a sequence of dark elements with different gray values and non-rectangular shapes, Gentile fails to anticipate or render obvious the claimed invention.

In addition, Gentile also fails to disclose or suggest the display of dark elements having different gray values and non-rectangular shapes in conjunction with estimation of a blackpoint for a display device. More particularly, Gentile does not suggest blackpoint estimation based on one of the dark elements selected by the user that is visible and appears to most closely match the black background.

In his analysis, the Examiner recognized that Gentile is not directed to blackpoint estimation, but stated that Gentile uses a "similar" term, i.e., white point estimation. The Examiner asserted that the terms are similar in light of the definitions provided by Gentile and Applicant's disclosure. Finally, in view of this perceived similarity, the Examiner characterized Gentile as estimating blackpoint based on a dark element selected by a user that is visible and appears to most closely match the background.

Notwithstanding the deficiencies already described above with respect to non-rectangular elements, the Examiner's analysis of the additional requirements of the claims is also seriously flawed. First, white point and black point are not similar. In a sense, they are opposites. The black point generally refers to the lowest RGB values capable of representation on the display device. On the contrary, the white point generally refers to the high RGB values capable of representation on the display device. Applicant was unable to find in Gentile any definition of white point that would support the similarity suggested by the Examiner. In view of the dissimilarity of these terms, Gentile does not disclose blackpoint estimation, as required, and therefore cannot anticipate the claims.

Second, contrary to the Examiner's interpretation, Gentile does not describe estimation of blackpoint (or white point for that matter) based on a dark element selected by a user that is visible and appears to most closely match the background. The gray patches displayed according

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to the Gentile reference are not dark elements. Rather, they appear to correspond to sample white points approximating neutral grays. See, e.g., Gentile, at page 4, line 25, to page 5, line 3. Moreover, although the gray patches in Gentile are displayed against a black background, there is no mention of selecting a gray patch that appears to most closely match that background. Instead, a user selects a graph patch appearing to have the most neutral gray color, without regard to whether there is any match with the black background.

For purposes of brevity, and in view of the fundamental shortcomings of the Gentile reference discussed above, Applicant has at this time withheld further comments concerning the features set forth in the dependent claims. In focusing on the requirements of the independent claims, Applicant neither admits nor acquiesces in the propriety of the rejections applied against the dependent claims. Applicant reserves the right to further address other features of the independent or dependent claims in any future communications.

In view of the differences identified above, the rejection under section 102 is improper and must be withdrawn.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 3-5, 7-8, 14-22, 25-27, 29-30, 33, 36 and 38 under 35 U.S.C. 103(a) as being unpatentable over Gentile in view of U.S. Patent No. 5,910,76 to Gormish (Gormish). Applicant respectfully traverses the rejection for at least the reasons described above with respect to the rejection under section 102. Gormish provides no teaching sufficient to overcome the fundamental deficiencies in the Gentile reference, as described above.

In view of the shortcomings of the Gentile reference, it is not necessary to comment on the teachings provided by Gormish. However, Applicant neither admits nor acquiesces in the propriety of the Examiner's characterizations of Gormish or the application of this reference to the claimed invention. Rather, Applicant reserves the right to point out differences between Gormish and any aspect of the claimed invention in any future communications that may be necessary.

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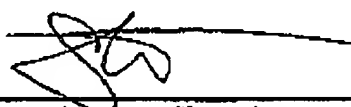Response to Office Action mailed April 20, 2005

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

7-20-05

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